



ELETTROTEC®

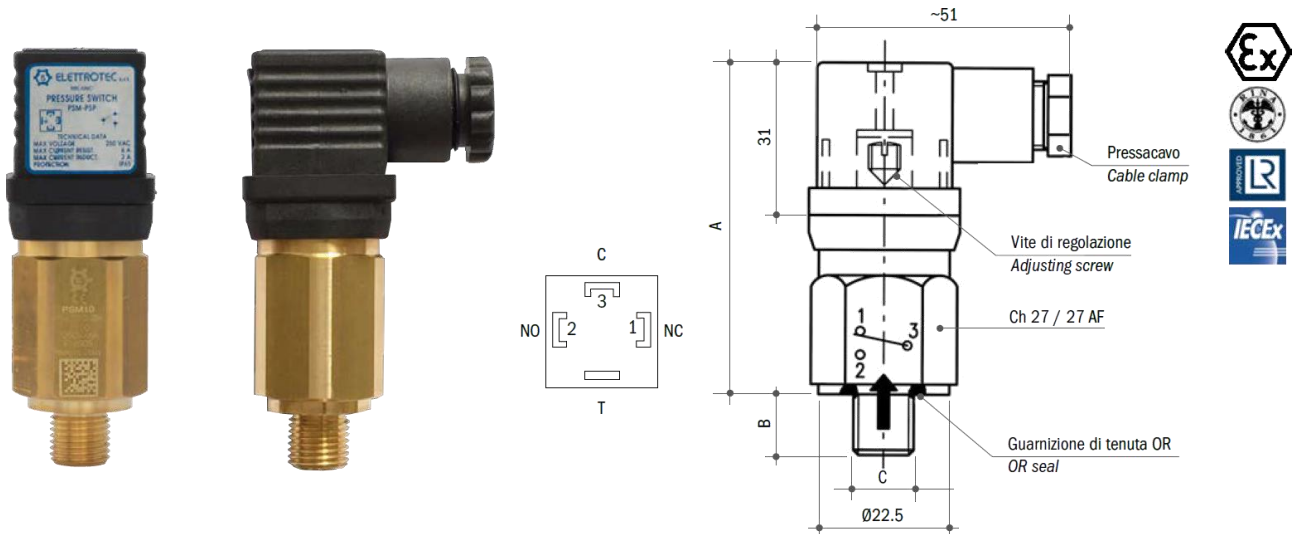
CONTROL DEVICES FOR FLUIDS

PSM - PSP INSTRUCTION MANUAL

Adjustable pressure switches with SPDT contacts

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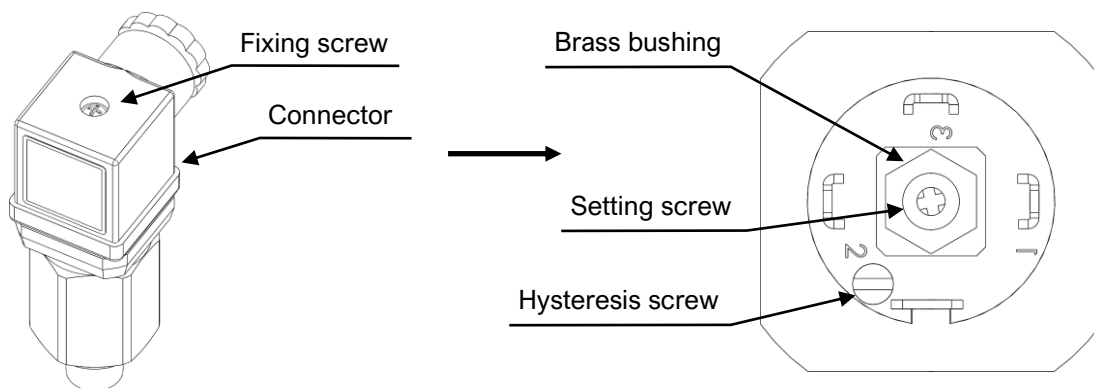
OVERVIEW



PREPARATION

The adjustment process requires a suitable pneumatic or hydraulic pressure generator with a pressure transducer or a pressure gauge and an acoustic or visual alarm device to be connected to the electric contacts of the pressure switch. The required set-point value should be read right in the middle of the gauge reading scale. For example, it is recommended to use a pressure transducer from 0 to 10 bar when adjusting a pressure switch at 5 bar.

To locate the setting screw and the hysteresis screw, remove the top connector by unfixing the fixing screw. Finally, remove the brass bushing.



Choosing rising or falling set-up

The pressure switch can be set-up on rising or falling. The chosen type of adjustment shall be based on the application necessities and the performance desired.

A rising adjusted pressure switch has the narrowest reset switching point, while a falling adjusted pressure switch has a wider reset switching value. These differences in the switching points can vary from a few tenths of bar on low pressure execution to a few bar in high-pressure execution.

Set-up on rising

Use a screwdriver to rotate the setting screw: turn clockwise to rise the switching point, turn counter-clockwise to reduce the switching point. Starting from a pressure of 0 bar and gradually rising, once reached the required

set-point, the contact will switch from normally closed (N.C.) to normally open (N.O.) or vice versa. Check the reading operation several times to ensure the switching point is set-up to the desired pressure. Repeat the adjustment process again if necessary.

Set-up on falling

Starting from the working pressure, slowly decrease the pressure below the switching point. Use a screwdriver to rotate the setting screw: turn clockwise to rise the switching point, turn counter-clockwise to reduce the switching point. Starting from the working pressure and gradually decreasing, once reached the required set-point, the contact will switch from normally open (N.O.) to normally close (N.C.) or vice versa. Check the reading operation several times to ensure the switching point is set-up to the desired pressure. Repeat the adjustment process again if necessary.

HYSTERESIS ADJUSTMENT

The hysteresis is the subtraction between the set-point pressure and the contact resetting pressure.

Example:

Working pressure starting at 0 bar rising, the pressure switch is set-up at 2.8 bar rising. As the working pressure decreases, the pressure switch contacts reset at 2.1 bar.
Then the hysteresis value is 0.7 bar.

Set-up the hysteresis

The hysteresis can be adjusted through the small brass hysteresis screw on the top of the pressure switch. The screw should be adjusted in small steps, as this type of adjustment is very sensitive and could dramatically alter the hysteresis.

Using a thin flat screwdriver, turn the screw clockwise to increase the hysteresis, turn counter-clockwise to decrease it. Adjust the screw in small steps i.e. $\frac{1}{4}$ of a complete turn at a time. The adjusting range is approximately one complete round of the screw. Check the hysteresis range and continue to adjust it until the desired range is found. Finally, test the reading operation a few times to check the correct actuation point and repeat the process again if needed.

Be careful, as making a too narrow hysteresis will cause a double contact (the N.O. and N.C. contacts will be closed at the same time), making a too wide hysteresis will cause one of the two contacts to never close.

For further information, please [contact](#) our technical office.